TIBCO ActiveMatrix® Service Bus

Installation

Software Release 2.3
February 2010

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Preface

This software may be available on multiple operating systems. However, not all operating system platforms for a specific software version are released at the same time. Please see the readme.txt file for the availability of this software version on a specific operating system platform.

Topics

- Related Documentation, page vi
- Typographical Conventions, page viii
- How to Contact TIBCO Support, page xi

Related Documentation

This section lists documentation resources you may find useful.

TIBCO ActiveMatrix Documentation

The following documents form the ActiveMatrix documentation set:

- *TIBCO ActiveMatrix Service Bus Installation* Read this manual for instructions on site preparation and installation.
- *TIBCO ActiveMatrix Concepts* Read this manual before reading any other manual in the documentation set. This manual describes terminology and concepts of the ActiveMatrix platform. The other manuals in the documentation set assume you are familiar with the information in this manual.
- *TIBCO ActiveMatrix Administration* Read this manual to learn how to manage the ActiveMatrix runtime and deploy and manage ActiveMatrix services.
- *TIBCO ActiveMatrix Composite Editor User's Guide* Read this manual to learn how to develop, debug, and package ActiveMatrix composites.
- *TIBCO ActiveMatrix Service Bus Getting Started* Read this manual for a quick introduction to the product that walks you through a brief tutorial.
- *TIBCO ActiveMatrix Service Bus Mediation Design Guide* Read this manual to learn how to develop mediation flows using the Mediation Editor.
- *TIBCO ActiveMatrix Service Bus Release Notes* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release.

Third-Party Documentation

TIBCO ActiveMatrix software supports the following standards:

- Service Component Architecture http://www.osoa.org/display/Main/Service+Component+Architecture+Specifications

- World Wide Web Consortium web services activity
  http://www.w3.org/2002/ws/
  - Simple Object Access Protocol (SOAP) 1.1 W3C Note
    http://www.w3.org/TR/2000/NOTE-SOAP-20000508/
  - WSDL 1.1 W3C Note
    http://www.w3.org/TR/wsdl
- OASIS
  http://www.oasis-open.org/committees/tc_cat.php?cat=ws
  - UDDI Version 2 OASIS Standard
    http://www.oasis-open.org/specs/index.php#uddiv2

Typographical Conventions

The following typographical conventions are used in this manual.

Table 1 General Typographical Conventions

Convention	Use
TIBCO_HOME *ENV_NAME* *ENV_HOME* *AMX_HOME* *AMX_ADMIN_HOME*	Many TIBCO products are installed within the same home directory. This directory is referenced in documentation as *TIBCO_HOME*. The value of *TIBCO_HOME* depends on the operating system. For example, on Windows systems the default value is `C:\tibco`. Other TIBCO products are installed into an installation environment. A product installed into an installation environment does not access components in other installation environments. Incompatible products and multiple instances of the same product must be installed into different installation environments. An installation environment consists of the following properties: • **Name** Identifies the installation environment. The name is appended to the name of Windows services created by the installer and is used in the path to the product in the Windows Start > All Programs menu. This directory is referenced in documentation as *ENV_NAME*. • **Description** Provides information about what the environment contains or is used for. • **Path** The directory into which the product is installed. This directory is referenced in documentation as *ENV_HOME*. The value of *ENV_HOME* depends on the operating system. For example, on Windows systems the default value is `C:\tibco`. TIBCO ActiveMatrix installs into a directory inside *ENV_HOME*. This directory is referenced in documentation as *AMX_HOME*. The value of *AMX_HOME* depends on the operating system. For example, on Windows systems the default value is `C:\tibco\amx\`. TIBCO ActiveMatrix Administrator installs into a directory inside *ENV_HOME*. This directory is referenced in documentation as *AMX_ADMIN_HOME*. The value of *AMX_ADMIN_HOME* depends on the operating system. For example, on Windows systems the default value is `C:\tibco\amxadministrator\`.
`code font`	Code font identifies commands, code examples, filenames, pathnames, and output displayed in a command window. For example: Use `MyCommand` to start the foo process.

Table 1 General Typographical Conventions (Cont'd)

Convention	Use
`bold code font`	Bold code font is used in the following ways: • In procedures, to indicate what a user types. For example: Type **`admin`**. • In large code samples, to indicate the parts of the sample that are of particular interest. • In command syntax, to indicate the default parameter for a command. For example, if no parameter is specified, `MyCommand` is enabled: `MyCommand [`**`enable`**` | disable]`
italic font	Italic font is used in the following ways: • To indicate a document title. For example: See *TIBCO ActiveMatrix BusinessWorks Concepts*. • To introduce new terms For example: A portal page may contain several portlets. *Portlets* are mini-applications that run in a portal. • To indicate a variable in a command or code syntax that you must replace. For example: `MyCommand` *pathname*
Key combinations	Key name separated by a plus sign indicate keys pressed simultaneously. For example: Ctrl+C. Key names separated by a comma and space indicate keys pressed one after the other. For example: Esc, Ctrl+Q.
	The note icon indicates information that is of special interest or importance, for example, an additional action required only in certain circumstances.
	The tip icon indicates an idea that could be useful, for example, a way to apply the information provided in the current section to achieve a specific result.
	The warning icon indicates the potential for a damaging situation, for example, data loss or corruption if certain steps are taken or not taken.

Table 2 Syntax Typographical Conventions

Convention	Use
`[ ]`	An optional item in a command or code syntax. For example: `MyCommand [optional_parameter] required_parameter`
`|`	A logical 'OR' that separates multiple items of which only one may be chosen. For example, you can select only one of the following parameters: `MyCommand para1 | param2 | param3`

`{ }`	A logical group of items in a command. Other syntax notations may appear within each logical group.
	For example, the following command requires two parameters, which can be either the pair `param1` and `param2`, or the pair `param3` and `param4`.
	`MyCommand {param1 param2} | {param3 param4}`
	In the next example, the command requires two parameters. The first parameter can be either `param1` or `param2` and the second can be either `param3` or `param4`:
	`MyCommand {param1 | param2} {param3 | param4}`
	In the next example, the command can accept either two or three parameters. The first parameter must be `param1`. You can optionally include `param2` as the second parameter. And the last parameter is either `param3` or `param4`.
	`MyCommand param1 [param2] {param3 | param4}`

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, please contact TIBCO Support as follows.

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

  http://www.tibco.com/services/support

- If you already have a valid maintenance or support contract, visit this site:

  https://support.tibco.com

  Entry to this site requires a username and password. If you do not have a username, you can request one.

Chapter 1 Installing TIBCO ActiveMatrix Service Bus

This guide explains how to install TIBCO ActiveMatrix Service Bus on all supported platforms.

Topics

- *Installation Overview, page 2*
- *Software Requirements, page 6*
- *Installing Hibernate, page 10*
- *Installing TIBCO ActiveMatrix Service Bus, page 14*
- *Post-Installation Procedures, page 20*
- *Uninstalling the Software, page 32*
- *Frequently Asked Questions, page 34*

Installation Overview

This manual explains how to install TIBCO ActiveMatrix Service Bus.

Installation Modes

Three installation modes are available: GUI, console, and silent. In GUI mode only, you can create the first ActiveMatrix Administrator server and ActiveMatrix node as part of the installation process.

Installation Types

Two installation types are available, typical or custom. The typical installation type installs all component in the package on the specified platform; the custom installation type allows you to select components. The following component selections are available:

- **Administrator** Includes TIBCO ActiveMatrix Administrator, HSQLDB database, and TIBCO Management Daemon.

  When the Administrator component is selected, the installer provides the option of invoking the administrator server creation wizard to create the first ActiveMatrix Administrator server and ActiveMatrix node.

- **Design** Includes TIBCO Business Studio, Composite Editor, and Mediation Flow Editor and binding and implementation type editors. If you select this component, the Runtime component is also installed.

- **Runtime** SOAP, JMS, TIBCO Adapter, Mediation containers, and the Java and .NET containers, HSQLDB database, TIBCO Management Daemon, and TIBCO Policy Agent.

- **Documentation** *TIBCO ActiveMatrix Concepts*, *TIBCO ActiveMatrix Composite Editor User's Guide*, *TIBCO ActiveMatrix Administration*, *TIBCO ActiveMatrix Service Bus Installation*, *TIBCO ActiveMatrix Service Bus Getting Started*, *TIBCO ActiveMatrix Service Bus Mediation Design Guide*, and *TIBCO ActiveMatrix Service Grid Component Developer's Guide*.

Supported Hostnames

The host on which you install TIBCO ActiveMatrix Service Bus cannot have an underscore "_" in its name. If the hostname has an underscore, installation will fail.

Supported Platforms

The Design component is supported only on Windows (32 bit only) and Linux platforms.

UNIX

- AIX 5.3 POWER 64 bit
- HP-UX 11i v3/11.31 on IA-64/Itanium
- Solaris 9 on SPARC 32 and 64 bit
- Solaris 10 on SPARC 32 bit and 64 bit
- Solaris 10 x86, x86-64 bit

Linux

- Red Hat Enterprise Linux 4.x AS/ES, GTK on x86 and x86-64
- Red Hat Enterprise Linux 5.x AS/ES, GTK on x86 and x86-64
- OpenSuse 10.x, GTK on x86, x86-64, and zSeries

Windows

- Windows XP Professional SP2 on x86
- Windows Server 2003 on x86 and x86-64
- Windows Server 2008 on x86 and x86-64

Installer Account

Microsoft Windows

You must have administrator privileges for the machine on which TIBCO ActiveMatrix Service Bus is installed. If you do not have administrator privileges, the installer exits. Log out of the system and log in as a user with the required privileges, or request your system administrator to assign the privileges to your account.

If you intend to install the product on a network drive, ensure that the account used for installation has permission to access the network drive.

On Microsoft Windows 2003, before you start the installation, ensure that the files `vpd.properties` and `vpd.properties.tibco.`*hostname*, are available in the *USER_HOME*`/Windows/` folder. If not, copy these files from `C:/Windows/` to the *USER_HOME*`/Windows/` directory.

UNIX

TIBCO ActiveMatrix Service Bus can be installed by any type of user: regular (non-root) user and super-user (root). While installing the product on UNIX platforms, ensure that the same installer account is used to install all TIBCO ActiveMatrix products.

If the `whoami` command is not available to the user running the installer, the installer reports an error. The error can be ignored.

A graphic environment such as CDE or XWindows is required to run the installer in GUI mode.

Installer Log File

The installer log file, `tibco_universal_installer.`*timestamp*`.`*username*`_install.log`, is written to the `.TIBCO` folder of the user's home directory. The installer log file captures the following information:

- Installation environment details such as user that invoked the installer, hostname, Java home in the environment, operating system details, and so on.
- List of assemblies installed.

System Memory

A minimum of 2 GB of physical memory is required.

Disk Space

Disk Space Before Installation

Before installing TIBCO ActiveMatrix Service Bus extract the contents of the installation archive to a temporary directory. The installer files consume up to 560 MB of disk space.

Temporary Disk Space Required by the Installer

The installer requires at least 70 MB of free space in the temporary directory. On Microsoft Windows, the temporary directory location is `%SystemDrive%:\Documents and Settings\`*`user_name`*`\Local Settings\Temp`.

If your system does not have sufficient free disk space in the default temporary directory, you can run the installer with a different temporary directory by using the following option when starting the installer. For example:

`TIBCOUniversalInstaller -is:tempdir \`*`new_tmp`*

where *`\new_tmp`* has sufficient free disk space.

The installer calculates the disk space required in product home location for the selected components. The calculation is done before the actual installation (copying of files to system) begins. The installer will proceed only if sufficient free disk space is available in product home location.

However, if disk space is consumed by another process while the installer is copying the files, and if the required disk space is thereby reduced, the installer may fail and will then give a failure message.

While performing installation, avoid running other processes that consume disk space in product home location.

Disk Space After Installation

TIBCO ActiveMatrix Service Bus can consume 630 MB of free space under *ENV_HOME*.

Software Requirements

This section lists required and optional software products.

Hibernate 3.2.5

Required. The Hibernate product must be installed before installing TIBCO ActiveMatrix Service Bus. See Installing Hibernate on page 10 for details.

Product Compatibility

TIBCO ActiveMatrix Service Bus 2.3 is not compatible with TIBCO Business Studio 3.0.

TIBCO Software

The following TIBCO software products need not be installed on the machine on which TIBCO ActiveMatrix Service Bus is installed.

TIBCO Enterprise Message Service 4.3.0, 4.4.x, or 5.1.x

Required. TIBCO Enterprise Message Service is the messaging backbone for TIBCO ActiveMatrix Service Bus. You can install TIBCO Enterprise Message Service any time before running a TIBCO ActiveMatrix node. Enterprise Message Service is also used by the SOAP and JMS containers. These two containers support only Enterprise Message Service for JMS transport.

TIBCO Runtime Agent 5.4 or higher and TIBCO Administrator 5.4 or higher

Optional. Required only if the TIBCO Administrator authentication realm is used by TIBCO ActiveMatrix Administrator for authentication. You can install TIBCO Runtime Agent and TIBCO Administrator any time before running the TIBCO ActiveMatrix Administrator server creation utility.

TIBCO Runtime Agent 5.6 bundles TIBCO Rendezvous 8.1.1.

TIBCO Rendezvous 8.1.1

Required for TIBCO ActiveMatrix Adapter containers. You can install TIBCO Rendezvous any time before running TIBCO ActiveMatrix Adapter containers.

DBMS Software

Required. The database stores TIBCO ActiveMatrix administration information. You can install the database any time before running TIBCO ActiveMatrix Administrator server creation utility. Different DBMS software is supported for prototyping and production.

For prototyping, the following DBMS software is supported:

- HSQLDB 1.8.0 Installed by TIBCO ActiveMatrix Service Bus
- Oracle Express

For production, the following DBMS software is supported:

- Oracle 9i Release 2 (9.2)
- Oracle 10g Release 1 (10.1) with RAC
- Oracle 10g Release 2 (10.2) with RAC
- Oracle 11g Enterprise Edition Release 11.1.0.6.0 with RAC
- Microsoft SQL Server 2005 and 2008
- Sybase 15.0.2

JDBC Drivers

JDBC drivers are used by TIBCO ActiveMatrix Administrator and nodes to access the TIBCO ActiveMatrix database and by services to access JDBC resources. The following JDBC drivers are supported and included with TIBCO ActiveMatrix Service Bus:

- **HSQLDB** org.hsqldb.jdbcDriver
- **Microsoft SQL** tibcosoftwareinc.jdbc.sqlserver.SQLServerDriver
- **Oracle** tibcosoftwareinc.jdbc.oracleOracleDriver

TIBCO ActiveMatrix also supports Microsoft SQL, Oracle, and Sybase native JDBC drivers. However, to use SQL, Oracle, and Sybase JDBC drivers, which you manually package (using TIBCO Business Studio) and install. In order to package native drivers, install a Design component on the machine on which you plan to package the drivers. For instructions on how to package and install native drivers, see Packaging and Installing Native Database Drivers on page 20.

LDAP Servers

Optional. Required only if the LDAP authentication realm is used by TIBCO ActiveMatrix Administrator for authentication. The following LDAP servers are supported:

- OpenLDAP 2.3
- Microsoft ActiveDirectory 2003
- Sun ONE Directory Server 6.3

Web Browsers

Required to run the TIBCO ActiveMatrix Administrator GUI. The following web browsers are supported:

- Microsoft Internet Explorer 7.0
- Microsoft Internet Explorer 6.0 SP2
- Mozilla Firefox 2.0
- Mozilla Firefox 1.5

Adobe Flash 8 and Higher

Required to view the Monitor & Manage perspective in TIBCO ActiveMatrix Administrator GUI.

UDDI Registries

TIBCO ActiveMatrix Registry 2.0

Optional. TIBCO ActiveMatrix Registry is a UDDI registry for discovering and registering services during service development and deployment. You can browse the registry from TIBCO Business Studio and import WSDL files for use in developing services. TIBCO ActiveMatrix Administrator is integrated with TIBCO ActiveMatrix Registry.

TIBCO ActiveMatrix Runtime UDDI Server 1.1.0

Optional. TIBCO ActiveMatrix Runtime UDDI Server is a lightweight UDDI registry for discovering and registering services during service execution.

Microsoft Software

Required if you are developing .NET C# and Visual Basic component implementations.

- **.NET Framework 3.0** Required for running services in the .NET container.
- **Visual Studio 2005 or 2008** Required for developing services for the .NET container.

Installing Hibernate

Disk Space

Disk Space Before Installation

Before installing Hibernate you must extract the contents of the installation archive to a temporary directory. The installer files consume up to 60 MB of disk space.

Temporary Disk Space Required by the Installer

See Temporary Disk Space Required by the Installer on page 5.

Disk Space After Installation

Hibernate consumes 170 MB of free space under *ENV_HOME*.

Install Modes

Install Hibernate using one of the modes described in the sections:

- Installing in GUI Mode on page 10
- Installing in Console Mode on page 12
- Installing in Silent Mode on page 13

Installing in GUI Mode

To install Hibernate in GUI mode:

1. Open the physical media or download the Hibernate package.
2. Extract the Hibernate archive file to a temporary directory.
3. Navigate to the temporary directory.
4. Run **TIBCOUniversalInstaller**.
5. The Welcome screen appears. Click **Next**.

6. The License Agreement screen appears. After reading through the license text, click **I accept the terms of the license agreement** and then click **Next**. The Installation Environment screen appears.

Specify installation environment

An installation environment isolates product installations; a product installed into an installation environment does not access components in other installation environments. An installation environment consists of a name, description, and path. You can choose a new environment or an existing environment.

- **New Environment** To install the product into a new installation environment, specify the following properties:
  - **Name** Identifies the installation environment. The name cannot contain special characters such as "*", "?", ">", "<", ":", "|", "/", "\", or quotes (").

    The name is appended to the name of Windows services created by the installer and is a component of the path to the product in the Windows Start > All Programs menu.
  - **Description** Optional information about the products the environment contains or is used for.
  - **Path** The directory into which the product is installed. Type a path or click **Browse** to specify the path or accept the default location.

    The path cannot contain special characters such as "*", "#", "?", ">", "<", "%", "&", "$", "`" or "|". The path cannot be the same as the path of an existing environment.
- **Existing Environment** To install the product into an existing installation environment, select the environment from the Environment drop-down list. The Name, Description, and Path fields are populated automatically and cannot be edited.

When installing multiple products into an existing environment, ensure that the products are compatible. If they are not compatible, the product installations may be corrupted. See Product Compatibility on page 6.

Click **Next**.

Choose installation type

7. The Installation Type screen appears. Choose the Typical installation type. Click **Next**.
8. The Pre Install Summary screen appears listing your choices. Verify the list of products selected for install and then click **Install**. Click **Yes to All** to close any popup windows that display during installation.
9. The Post Install Summary screen appears. This screen summarizes the installation process. Click **Finish** to complete the installation process and close the installer window.

Installing in Console Mode

To install Hibernate in console mode:

1. Open the physical media or download the Hibernate package.
2. Extract the Hibernate archive file to a temporary directory.

3. Using a console window, navigate to the temporary directory that contains the universal installer.
4. Run **TIBCOUniversalInstaller -console**.
5. Complete the installation by responding to the console window prompts.

Installing in Silent Mode

In silent mode, the universal installer does not prompt for any inputs during installation. Instead, the inputs are read from a response file that can be provided as a command line parameter. If no value is specified, the installer uses the default `TIBCOUniversalInstaller.silent` file.

The `TIBCOUniversalInstaller.silent` file is packaged in the directory that contains the universal installer. Edit the file with information for your environment before launching the silent installation. The file includes comments that describe the installation properties you can set. While you can use the `TIBCOUniversalInstaller.silent` file, it's good practice to copy the file to a different name and use that file for the silent install.

The following procedure explains how to install the product in silent mode. If errors occur during installation, they will be listed in the installation log file contained in *User_Home*`/.TIBCO` directory.

1. Open the physical media or download the Hibernate package.
2. Extract the Hibernate archive file to a temporary directory.
3. Using a console window, navigate to the temporary directory.
4. Copy the `TIBCOUniversalInstaller.silent` file and name the file.
5. Using a text editor, open the copied file and update the install location and features to install.
6. Run the following:

   Windows `TIBCOUniversalInstaller.cmd -silent -V responseFile="`*myfilename*`.silent"`

   UNIX `TIBCOUniversalInstaller -silent -V responseFile="`*myfilename*`.silent"`

   When installation completes, a line similar to the following is written to the installer log file:

   ```
   Install, com.tibco.installer.util.TIBCOInstaller, dbg.Debug,The
   installation has completed. Please check the log file for
   additional information.
   ```

Installing TIBCO ActiveMatrix Service Bus

You can install TIBCO ActiveMatrix Service Bus 2.3 on a machine on which you have installed and are running previous versions of TIBCO ActiveMatrix Service Bus. However, before installing TIBCO ActiveMatrix Service Bus 2.3, shut down the Management Daemon process, ActiveMatrix Administrator servers, and ActiveMatrix nodes running on the machine.

After the installation, you may want to upgrade the existing Management Daemon, ActiveMatrix Administrator server, and nodes from the previous version to TIBCO ActiveMatrix 2.3 following the procedures described in the Migration section of the release notes for your product.

Install TIBCO ActiveMatrix Service Bus using one of the modes described in the sections:

- Installing in GUI Mode on page 14
- Installing in Console Mode on page 17
- Installing in Silent Mode on page 18

When installing in GUI mode with the Administrator component selected, the installer provides the option of starting the database server and invoking the administrator server creation utility to create the first ActiveMatrix Administrator server and ActiveMatrix node.

The administrator server creation utility cannot be invoked during installation when console or silent mode is used; run the utility after installation completes. See Chapter 3, ActiveMatrix Administrator Server in *TIBCO ActiveMatrix Administration* for details about how to start the administrator server creation utility and for information about the fields.

Installing in GUI Mode

To install TIBCO ActiveMatrix Service Bus in GUI mode:

1. Open the physical media or download the TIBCO ActiveMatrix Service Bus package.
2. Extract the TIBCO ActiveMatrix Service Bus archive file to a temporary directory.
3. Navigate to the temporary directory.
4. Run **TIBCOUniversalInstaller**.
5. The Welcome screen appears. Click **Next**.

6. The License Agreement screen appears. After reading through the license text, click **I accept the terms of the license agreement** and then click **Next**.

7. The Important Notice screen appears. Read through the information and click **Next**. The Installation Environment screen appears.

Specify installation environment

8. In the Environment drop-down list, select the same installation environment you used when you installed Hibernate in Installing Hibernate on page 10. Click **Next**.

Select installation type

9. Select **Typical** to install all the available features or **Custom** to choose the features to install. Click **Next**.

10. If you selected Typical, proceed to step 11. If you selected **Custom**, the Product Features screen appears listing the components available for installation. By default, all the components are selected. Uncheck the checkboxes next to the components you don't want installed. See Installation Types on page 2 for information about the components listed under each product. Click **Next**

11. The Pre Install summary screen appears. Verify the list of products selected for install and then click **Install**. Click **Yes to All** to close any popup windows that display during installation.

12. To install the Management Daemon as a Windows service check the **Create Windows service for Management Daemon** checkbox and then click **Next**.

13. If you have selected the Administrator component for installation the TIBCO ActiveMatrix Administrator screen appears. Two checkboxes are available:

    — **Launch Administrator Server Creation Wizard** runs Administrator server creation wizard in GUI mode as part of installation. The wizard is independent of the installer and can be used before installer completes.

    — **Start Default HSQLDB Database** starts the HSQLDB database.

    The Administrator server creation wizard allows you to create the first ActiveMatrix Administrator server and ActiveMatrix node. See Creating the First ActiveMatrix Administrator Server in *TIBCO ActiveMatrix Administration* for details about the Administrator server creation wizard configuration fields.

    While running the Administrator server creation wizard you select a database, which must be running before you start the wizard. If you are using HSQLDB database, check the Start Default HSQLDB Database checkbox. If you are using another database, start the server before running the wizard.

If you are using Sybase or Oracle thin drivers *do not* run the wizard because configuration of these drivers can only be performed when you run the wizard in silent mode.

While running the Administrator server creation wizard you select an authentication realm. If you are using one of the following realms for authentication, the realm server must be running before you start the wizard:

— TIBCO Administrator realm

— Database realm

— LDAP realm

Click **Next** after making your selections.

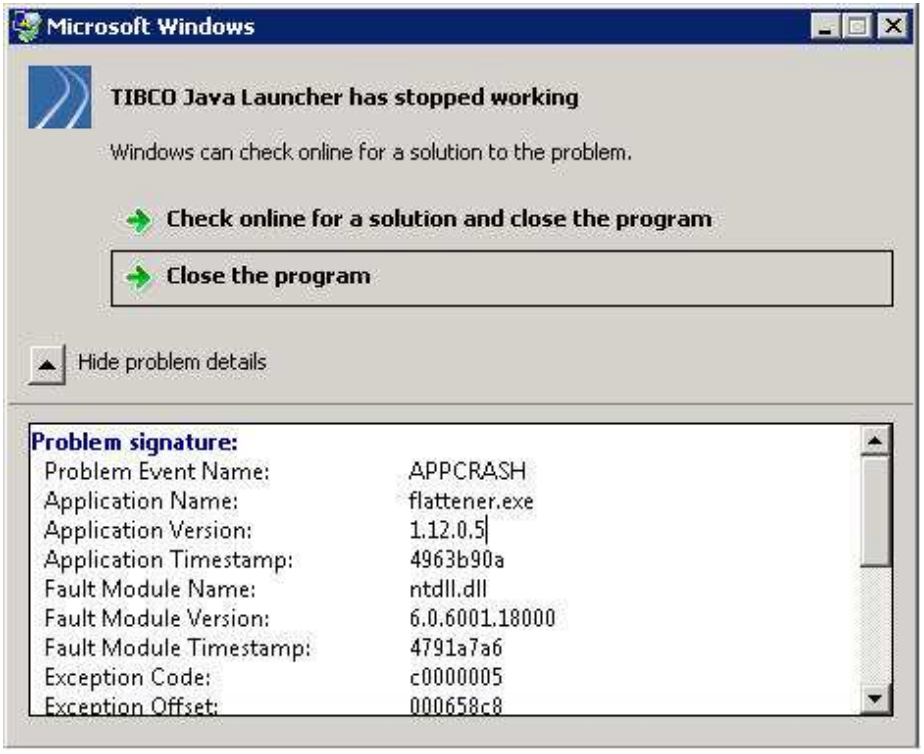
14. If you are installing on top of an existing ActiveMatrix 2.1 product installation three dialogs display asking whether to replace existing files. Dismiss the dialogs for each file as follows:

— *ENV_HOME*`/tools/scripts/addfeature.xml` **`Yes`**

— *ENV_HOME*`/tools/scripts/eclipseupgrader.xml` **`Yes`**

— *AMX_ADMIN_HOME*`/data/bootstrap.js` **`No`**

15. If you are installing on Windows 2008 at some point a Microsoft error dialog displays:


Microsoft Windows
TIBCO Java Launcher has stopped working
Windows can check online for a solution to the problem.
Check online for a solution and close the program
Close the program
Hide problem details
Problem signature:
Problem Event Name: APPCRASH
Application Name: flattener.exe
Application Version: 1.12.0.5
Application Timestamp: 4963b90a
Fault Module Name: ntdll.dll
Fault Module Version: 6.0.6001.18000
Fault Module Timestamp: 4791a7a6
Exception Code: c0000005
Exception Offset: 000658c8

This is a spurious error; the flattener command completes successfully. Click the **Close the program** button to dismiss the dialog.

16. The Post Install Summary screen appears. This screen summarizes the installation process. Click **Finish** to complete the installation process and close the installer window.

Installing in Console Mode

To install the software in console mode:

1. Open the physical media or download the TIBCO ActiveMatrix Service Bus package.
2. Extract the TIBCO ActiveMatrix Service Bus archive file to a temporary directory.
3. Using a console window, navigate to the temporary directory.
4. Run **TIBCOUniversalInstaller -console**.
5. Complete the installation by responding to the console window prompts.
6. After the installation completes, create the ActiveMatrix Administrator server following the instructions in Chapter 3, ActiveMatrix Administrator Server in *TIBCO ActiveMatrix Administration*.

Linux Installation Steps on IBM zSeries

To install on Linux running on IBM zSeries:

1. Install IBM Java 5 on your system. IBM Java distributions are available here:

   http://www.ibm.com/developerworks/java/jdk/linux/download.html

   Download the 64-bit zSeries(S/390) distribution:

   https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?source=sdk5&S_PKG=zseries645sr8&S_TACT=105AGX05&S_CMP=JDK

   We recommend you download and install the .rpm version of the JRE or JDK.

2. Install Hibernate 3.2.5 in console mode using the installation procedures in the Installation manual. Since the installer does not bundle the JRE required for the installer to start up, start the installer as follows:

```
% ./TIBCOUniversalInstaller-lnx-s390x -is:javahome <IBM JRE/JDK
HOME> -console
```

   Typically, the IBM JRE/JDK HOME would be a location such as: `/opt/ibm/java2-s390x-50`.

3. The installer requires a large number of files open concurrently, so increase the file handle limit for the user performing the installation. For example: `% set ulimit -n 2048`. If a nonroot user is installing the product you must ensure that the maximum number of open files hard limit is set to at least 2048. This can be checked from bash with the following command:

   ```
   $ ulimit -aH
   ```

   Look for the open files line to see what the hard limit is set to. For example:

   ```
   $ ulimit -aH
   core file size          (blocks, -c) unlimited
   data seg size           (kbytes, -d) unlimited
   file size               (blocks, -f) unlimited
   pending signals                 (-i) 16384
   max locked memory       (kbytes, -l) 32
   max memory size         (kbytes, -m) unlimited
   open files                      (-n) 2048
   pipe size            (512 bytes, -p) 8
   POSIX message queues     (bytes, -q) 819200
   stack size              (kbytes, -s) unlimited
   cpu time               (seconds, -t) unlimited
   max user processes              (-u) 16384
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited
   ```

4. If the open files line shows less than 2048 add the following line to the file `/etc/security/limits.conf`:

   ```
   *               hard    nofile          2048
   ```

5. Log out and log back in again.

6. Install the ActiveMatrix product in console mode using the installation procedures in the Installation manual. Since the installer does not bundle the JRE required for the installer to start up, start the installer as follows:

   ```
   % ./TIBCOUniversalInstaller-lnx-s390x -is:javahome <IBM JRE/JDK
   HOME> -console
   ```

Installing in Silent Mode

In silent mode, the universal installer does not prompt for any inputs during installation. Instead, the inputs are read from a response file that can be provided as a command-line parameter. If no value is specified, the installer uses the default `TIBCOUniversalInstaller.silent` file.

The `TIBCOUniversalInstaller.silent` file is packaged in the directory that contains the universal installer. Edit the file with information for your environment before launching the silent installation. The file includes comments that describe the installation properties you can set. While you can use the `TIBCOUniversalInstaller.silent` file, it's good practice to copy the file to a different name and use that file for the silent install.

The following procedure explains how to install a TIBCO ActiveMatrix Service Bus in silent mode. If errors occur during installation, they will be listed in the installation log file contained in *User_Home*/.TIBCO directory.

1. Open the physical media or download the TIBCO ActiveMatrix Service Bus package.
2. Extract the contents of the package to a temporary directory.
3. Using a console window, navigate to the temporary directory.
4. Make a copy of the TIBCOUniversalInstaller.silent file and rename the file.
5. Using a text editor, open the copied file and update the install location and features to install.
6. Run the following:

   Windows TIBCOUniversalInstaller.cmd -silent -V responseFile="*myfilename*.silent"

   UNIX TIBCOUniversalInstaller -silent -V responseFile="*myfilename*.silent"

   When installation completes, a line similar to the following is written to the installer log file:

   ```
   Install, com.tibco.installer.util.TIBCOInstaller, dbg.Debug,
   The installation has completed. Please check the log file for
   additional information.
   ```

Post-Installation Procedures

This section describes post-installation procedures:

- Migrating ActiveMatrix Components From 2.0.x/2.1.0/2.2.x To 2.3 on page 20
- ActiveMatrix Administrator Server on page 20
- Packaging and Installing Native Database Drivers on page 20
- Oracle OCI Driver Support on page 24
- Management Daemon on page 25
- Windows — .NET Extensions on page 25
- Windows — TIBCO Enterprise Message Service C# Client on page 25
- UNIX — Adapter Binding Containers on page 26
- Linux Installation Steps on IBM zSeriesPost-Installation Procedures on page 27
- Installing and Enabling SonicMQ 6.1 or 7.5 on page 27
- Using SOAP/JMS and JMS Bindings with WebLogic JMS on page 28
- Using SOAP/JMS and JMS Bindings with IBM WebSphere JMS on page 30

Migrating ActiveMatrix Components From 2.0.x/2.1.0/2.2.x To 2.3

See the Migration section of the release notes for the procedures for migrating ActiveMatrix 2.0.x/2.1.0/2.2.x components to ActiveMatrix 2.3.

ActiveMatrix Administrator Server

If you did not create the ActiveMatrix Administrator server during installation, create the server following the instructions in Chapter 3, ActiveMatrix Administrator Server in *TIBCO ActiveMatrix Administration*.

Packaging and Installing Native Database Drivers

To enable access to a database through native database drivers you package the drivers in a feature and install the feature on each machine that will run ActiveMatrix Administrator servers and ActiveMatrix nodes. To package and install native database drivers:

1. Run TIBCO Business Studio:

Windows From the Start menu, follow the path **All Programs > TIBCO >** *ENV_NAME* **> TIBCO Business Studio**. From the command line, run *ENV_HOME*`/BusinessStudio/TIBCOBusinessStudio.exe`.

UNIX Run *ENV_HOME*`/BusinessStudio/TIBCOBusinessStudio.sh`.

Create fragment project

2. Create a fragment project. Select **File > New Project... > Plug-in Development > Fragment Project**. For information on how to configure a Fragment project, see *Help* > *Help Contents* > *Plug-in Development Environment Guide* > *Tools* > *Fragment Project*.
3. In the Fragment Project screen:
   a. In the Project name field, type an appropriate name for the project.
   b. Retain all other default settings and click **Next**.
4. In the Host Plug-in area of the Fragment Content screen click the **Browse...** button next to the Plug-in ID field.
   a. Select the com.tibco.tpcl.jdbc.drivers (1.0.0.009) plug-in and click **OK**.
   b. In the Maximum Version field, enter `2.0.0`.
   c. Click **Finish**.
   d. Click **Yes** when TIBCO Business Studio asks to open the Plug-in Development perspective. The perspective switches and the MANIFEST.MF file is opened in a manifest editor.
   e. Click the **MANIFEST.MF** tab. The following entry should appear in the file:

      Fragment-Host: com.tibco.tpcl.jdbc.drivers;bundle-version="[1.0.0,2.0.0)"

Import and configure drivers

5. Import the JARs containing the native drivers into the project. These JARs are not shipped with TIBCO ActiveMatrix Service Bus..

Database	Path	JARs
Oracle 11	*ORACLE_HOME*`/jdbc/lib/`	`ojdbc5.jar`
Oracle 10	*ORACLE_HOME*`/jdbc/lib/`	`classes12.jar` or `ojdbc14.jar`
Microsoft SQL Server	See the Microsoft SQL Server documentation.	
Sybase	*SYBASE_HOME*`/jConnect-6_0/classes`	`jconn3.jar`, `jTDS3.jar`

6. In the MANIFEST.MF file editor:
   a. Click the **Runtime** tab. In the Classpath area, add the drivers. In the Exported Packages area, export the packages.
7. Click the **Save** button to save the fragment project.

Create feature

8. Create a feature project. Select **File > New Project... > Plug-in Development > Feature Project**. For information on how to configure a Fragment project, see *Help* > *Help Contents* > *Plug-in Development Environment Guide* > *Tools* > *Feature Project*.
9. In the Project name field, type an appropriate name for the project.
10. In the Referenced Plug-ins and Fragments screen, select the fragment you created in step 4. Click **Finish**. The `feature.xml` file is opened in a feature editor.
11. In the **Overview** tab, note the Feature ID in the General Information area. This ID is used when you install the feature in step 15.
12. Click the **Plug-ins** tab. Ensure that the fragment is selected in the Plug-ins and Fragments list.
    a. Click the **Versions...** button. In the Synchronization Options area, click the **Copy versions from plug-in and fragment manifests** radio button and click **Finish**.
    b. In the Plug-in Details area, check the **Unpack the plug-in archive after the installation** checkbox.
13. Click the **Save** button to save the feature project.

Create deployable archive

14. In the Package Explorer, right-click the feature and select **Export...**.
    a. Select **Plug-in Development > Deployable features**.
    b. Click **Next**.
    c. In the Available Features area, ensure that the checkbox next to the feature is checked.
    d. In the Destination tab, click the **Archive file** radio button. Click **Browse...** and browse to a directory.
    e. Enter a file name and click **Save**.
    f. Click **Finish**.

Install feature

15. On all machines running ActiveMatrix Administrator servers and ActiveMatrix nodes:
    a. Extract the contents of the zip file you created in step 14 into the directory *ENV_HOME*/components/eclipse/.
    b. Open a command window.
    c. Change to the *ENV_HOME*/tools/bin/ directory.
    d. Run the command:

```
tibcommander -Dfeature.name=featureID -f
   ENV_HOME/tools/scripts/addfeature.xml
```

    where *featureID* is the Feature ID displayed in step 11.

Configuring Existing ActiveMatrix Administrator Servers and ActiveMatrix Nodes

To use the database as a JDBC shared resource on your existing ActiveMatrix Administrator and runtime nodes:

1. Install the native drivers.
2. For ActiveMatrix Administrator servers, follow these steps on all machines running the ActiveMatrix Administrator servers:
    a. Open a command window.
    b. Change to the *ENV_HOME*/tools/bin/ directory.
    c. Run the command:

```
flattener -file
   AMX_ADMIN_HOME/data/clusternanme/servername/bin/clusternanme_servername.tra
```

3. For ActiveMatrix runtime nodes, follow these steps on all machines running ActiveMatrix nodes:
    a. Open a command window.
    b. Change to the *ENV_HOME*/tools/bin/ directory.
    c. Run the command:

```
tibcommander -f AMX_HOME/2.3/server/bin/nodeupgrader.xml
   -Dnodes=environment1/node1,...,environmentN/nodeN -l
   nodeupgrader.log
```

    where *environment1/node1*, . . . , *environmentN/nodeN* refer to your environment names and node names in those environments.

Oracle OCI Driver Support

The Oracle OCI driver is supported. OCI driver support is available only in silent mode, which means that you can create a cluster with the OCI driver only with the `-silent` option of the `createadminserver` utility.

To create a cluster with the Oracle OCI driver:

1. Follow the instructions in Packaging and Installing Native Database Drivers on page 20 to package and install the driver as a feature and plug-in.
2. Edit `tra` files to update environment variables.

   These are the `tra` files you need to update:

   – *AMX_ADMIN_HOME*`/2.3/bin/createadminserver.tra`
   – *AMX_ADMIN_HOME*`/2.3/bin/deleteadminserver.tra`
   – *AMX_ADMIN_HOME*`/2.3/bin/dbscriptgenerator.tra`
   – *AMX_ADMIN_HOME*`/2.3/bin/startadminserver.template.tra`
   – *TIBCO_HOME*`/managementdaemon/2.0/bin/managementdaemon.tra`

   For each `tra` file liste, append the *ORA_HOME*`/bin` (*ORA_HOME*`/lib` for UNIX) that contains the native libraries for the driver to these environment variables

   Windows `tibco.env.PATH`

   Linux and Solaris `tibco.env.LD_LIBRARY_PATH`

   HPUX `tibco.env.SHLIB_PATH`

   AIX `tibco.env.LIBPATH`

Refer to Oracle's documentation for the exact path to the native libraries that are required by the OCI driver.

3. Enable the property `cluster.application.db.dialect` in the file *AMX_ADMIN_HOME*`/2.3/bin/createadminserver.properties` in the Application database properties section.

   Enable this property in the Realm database section as well, for a database realm-based cluster.
4. If you want to pre-create a schema, locate the Oracle properties and set the value of the property `hibernate.dialect` to `com.tibco.matrix.persistence.core.TibcoOracleDialect`.

Management Daemon

On Windows, the Management Daemon process is optionally installed as a Windows service named TIBCO Management Daemon 2.0. Its startup type is Automatic which means that Management Daemon starts when Windows starts. If you do not want Management Daemon process to start automatically, change the startup type to Manual.

Windows — .NET Extensions

If you have installed TIBCO ActiveMatrix Service Bus and are developing .NET component implementations, install the Visual Studio extensions that are included in the installation package. Visual Studio must be installed before running the TIBCO ActiveMatrix Setup wizard, which is used to install the extensions. To install the Visual Studio extensions:

1. Navigate to *AMX_HOME*`/2.3/containers/.NET/bin/designtime/`.
2. Run `TIBCOActiveMatrixVSExtensionsSetup.msi`.
3. The TIBCO ActiveMatrix Setup wizard appears. Complete the screens in the wizard to add the extensions to Visual Studio.

Windows — TIBCO Enterprise Message Service C# Client

Before running .NET containers on TIBCO ActiveMatrix Service Grid nodes install a VC 8 compiled C# client DLL (`TIBCO.EMS.dll`) distributed with TIBCO Enterprise Message Service version 4.4.3 or higher into the Windows Global Assembly Cache (GAC). VC 8 compiled binaries are identified by a terminal `vc8` component in the name of the distribution package. For example: `TIB_ems_5.1.0_win_x86_vc8.zip`.

The way in which you install the C# client DLL depends on the version of Enterprise Message Service you are using.

Enterprise Message Service 4.4.3

1. Perform a Custom installation and select C# Client from the list of features that can be installed. (Performing a Typical installation will also install the C# client.)
2. Install the C# client in the GAC using one of the following methods:
   — Drag and drop (*do not* copy) the `TIBCO.EMS.dll` file from the *EMSInstallDir*`/clients/cs/` folder to the `C:/WINDOWS/assembly/` folder.

The `assembly` folder is a special folder where the .NET Framework stores assemblies for the GAC.

— Use the GAC tool (gacutil)
http://msdn.microsoft.com/en-us/library/ex0ss12c(VS.80).aspx

Enterprise Message Service 5.x

- Install the Runtime feature, which automatically installs the C# client DLL in the GAC.

UNIX — Adapter Binding Containers

If you want to run TIBCO ActiveMatrix Adapter containers on UNIX systems, set the following environment variables:

- Set *PATH* to include *RV_HOME*`/bin` and *RV_HOME*`/lib`.
- Set *LD_LIBRARY_PATH* to include *RV_HOME*`/lib`.
- On 64-bit platforms, set *LD_LIBRARY_PATH* (or *SHLIB_PATH*) to include *RV_HOME*`/lib/64`.

Edit the following paths in *AMX_HOME*`/2.3/server/bin/server.tra`, which is the template for all the nodes created on a machine:

- `tibco.env.PATH=`*RV_HOME*`/bin%PSP%`*RV_HOME*`/lib%tibco.flattener.library.path%%PSP%%PATH%`
- `tibco.env.LD_LIBRARY_PATH=`*RV_HOME*`/lib%PSP%%tibco.flattener.library.path%%PSP%%LD_LIBRARY_PATH%`
- `tibco.env.SHLIB_PATH=`*RV_HOME*`/lib%PSP%%tibco.flattener.library.path%%PSP%%SHLIB_PATH%`
- `tibco.env.LIBPATH=`*RV_HOME*`/lib%PSP%%tibco.flattener.library.path%%PSP%%LIBPATH%`

Linux Installation Steps on IBM zSeriesPost-Installation Procedures

The LD_LIBRARY_PATH variable cannot be set to reflect the location of the bundled JRE in your profile until the installation is complete. To complete post- install tasks, do the following:

1. Prepend the location of the JRE bundled in your product (*AMX_HOME*/tibcojre64/1.5.0/bin) to the LD_LIBRARY_PATH variable in your user profile script.
2. Change to the *ENV_HOME*/managementdaemon/2.0/bin/ directory and run managementscript.
3. Change to the *ENV_HOME*/managementdaemon/2.0/daemonlets/com.tibco.matrix.daemonlet directory and run amxdaemonletscript.

Installing and Enabling SonicMQ 6.1 or 7.5

If you plan to use SonicMQ 6.1 as a JMS provider for the JMS binding type, follow these instructions to install and enable it:

1. Copy these JAR files from the SonicMQ 6.1 installation to *AMX_HOME*/components/eclipse/plugins/com.tibco.jms.sonicclient_6.1.0.001:
   - mfcontext.jar
   - sonic_ASPI.jar
   - sonic_Client.jar
   - sonic_SF.jar
   - sonic_Selector.jar
   - sonic_XMessage.jar
   - sonic_Channel.jar
   - sonic_Crypto.jar
   - sonic_SSL.jar
   - sonic_XA.jar
   - sonic_mgmt_client.jar
2. Change directory to *AMX_HOME*/tools/bin.
3. Install the Sonic feature:

```
   tibcommander -Dfeature.name=com.tibco.jms.sonicclient.feature
-file ../scripts/addfeature.xml
```

To install the Sonic feature in a node that existed before you copied the Sonic JARs from the Sonic installation and enabled the Sonic feature in step 3:

1. Change to the *AMX_HOME*`/tools/bin` directory.
2. Run `tibcommander -f` *AMX_HOME*`/amx/2.3/server/bin/nodeupgrader.xml -Dnodes=`*env name/node name*

If you want to use a Sonic 7.5 server you have the following options:

- If the Sonic 6.x client works with 7.x server, continue to use an installed Sonic 6.x feature.
- Use the installed Sonic 6.x feature as is and put the 7.x client JARs in *AMX_HOME*`/components/eclipse/plugins/com.tibco.jms.sonicclient_6.1.0.001`.
- Create a 7.x plug-in and feature similar to 6.x feature to contain the 7.x client JARs following the procedure in Packaging and Installing Native Database Drivers on page 20. Add the following line to the plug-in manifest: `Fragment-Host: com.tibco.neo.resource.adapter.jms`. Install the feature.

Using SOAP/JMS and JMS Bindings with WebLogic JMS

Creating wlfullclient.jar

1. From the WebLogic installation, go to the directory *WL_HOME*`/server/lib` (For example, `C:\bea\weblogic_10.3\wlserver_10.3\server\lib`)
2. Create `wlfullclient.jar` using the command: `java -jar wljarbuilder.jar`. Thewlfullclient.jar will be created in the *WL_HOME*`/server/lib` directory.

Packaging and Installing wlfullclient.jar

Follow the steps Packaging and Installing Native Database Drivers on page 20 and package `wlfullclient.jar` as a feature. In step 4.a., replace “com.tibco.tpcl.jdbc.drivers” with “com.tibco.neo.resource.adapter.jms”. In step 5 “import and configure drivers”, import the above created wlfullclient.jar. (Just import the jar, no need to unzip the jar) Follow the steps in Configuring Existing ActiveMatrix Administrator Servers and ActiveMatrix Nodes on page 23 for installing wlfullclient.jar for existing Administrator server and nodes.

Creating the JMSUserExit Plug-in for SOAP/JMS Interoperability of ActiveMatrix Service Grid with WebLogic

Follow the steps in Appendix A, SOAP/JMS Interoperability in *TIBCO ActiveMatrix Composite Editor User's Guide*.

Configuring WebLogic JMS Variables in JMS and JNDI Shared Resources

JNDI lookup is supported only for Connection Factories and not for the destinations.

- JNDI shared resource configuration

```
JNDI Context Factory = weblogic.jndi.WLInitialContextFactory
JNDI Context URL = t3://<weblogichost>:7001 (i.e.
t3://WEBLOGIC_HOST:WEBLOGIC_PORT)
JNDI Username = weblogic
JNDI Password = weblogic
(By default the JNDI Username/password is “weblogic”)
```

- JMS shared resource configuration:

```
JMS Username =
JMS Password = (By default JMS Username/password is empty)
Connection Factory = weblogic.examples.jms.QueueConnectionFactory
```

`weblogic.examples.jms.QueueConnectionFactory` is an existing QueueConnectionFactory, obtained from the WebLogic UI: wl_server->Services->Messaging->JMS Modules->examples-jms. You can follow this and create a different QueueConnectionFactory and use it.)

Creating an ActiveMatrix Service Bus Client for the WebLogic Service

Get a WSDL file from the WebLogic service and use it to create a SOAP/JMS reference. ActiveMatrix Service Bus will detect that the WSDL file is a third-party WSDL file.

Destination Queue name in ActiveMatrix Service Bus Reference

The destination queue name in the ActiveMatrix Service Bus reference (that is, the one pointing to the WebLogic queue) should be the local WebLogic JMS queue name and should use the following naming format:

```
JMS_SERVER_NAME/JMS_MODULE_NAME!DESTINATION_NAME
```

For example:

```
examplesJMSServer/examples-jms!helloWorldFaultQueue
```

The destination queue name should include server name followed by a /, module name, exclamation symbol, and then the destination queue name. The queue should have a 'sub deployment' chosen during the creation of the queue and a JNDI name.

ActiveMatrix Service Bus inbound requests on WebLogic topics are not yet supported. Use WebLogic topic to queue messaging bridge to accomplish this. Refer to the WebLogic help for creating messaging bridge, section ->Creating messaging bridge instances.

Using SOAP/JMS and JMS Bindings with IBM WebSphere JMS

Packaging and Installing WebSphere Client JARs

Follow the steps in Packaging and Installing Native Database Drivers on page 20.

1. In step 4.a., replace "com.tibco.tpcl.jdbc.drivers" with "com.tibco.neo.resource.adapter.jms".
2. In step 5, import following WebSphere client JARs:
   - com.ibm.mq.jar
   - com.ibm.mq.jmqi.jar
   - com.ibm.mq.soap.jar
   - com.ibm.mqjms.jar
   - connector.jar
   - dhbcore.jar
   - fscontext.jar
   - jta.jar
   - ldap.jar
   - providerutil.jar
3. In step 6a, after exporting packages, import the following package with a version range 1.0.1 and 2.0.0: javax.transaction.

Follow the steps in Configuring Existing ActiveMatrix Administrator Servers and ActiveMatrix Nodes on page 23 for installing the WebSphere client JAR for existing Administrator server and nodes.

Creating the JMSUserExit Plug-in for SOAP/JMS Interoperability of ActiveMatrix Service Grid

with IBM WebSphere JMS

Follow the steps in Appendix A, SOAP/JMS Interoperability in *TIBCO ActiveMatrix Composite Editor User's Guide*.

A sample extension for WebLogic is available at *AMX_HOME*/2.3/samples/amx/SOAP-Interop.

To interoperate with WebSphere, modify the implementation of `SoapJmsExtension.onRequest()` method as follows:

```
public void onRequest (Port port, String operationName, Map<String,
String> messageProperties) {
messageProperties.put("targetService", "<name of the service>");
}
```

Configuring WebSphere MQ JMS Variables in JMS and JNDI Shared Resources

JNDI lookup is supported only for connection factories and not for the destinations.

JNDI Shared Resource Configuration

- File-based lookup

```
JNDI Context Factory= com.sun.jndi.fscontext.RefFSContextFactory
JNDI Context URL = file:/C:/IBM_Bindings (path for the Bindings
Directory)
```

- LDAP-based lookup

```
JNDI Context Factory= com.sun.jndi.fscontext.RefFSContextFactory
JNDI Context URL = ldap://host:port/distinguished name
JNDI Username and Password: (/ as per your installation)
```

JMS Shared Resource Configuration

- File-based lookup

```
ConnectionFactory: QueueConnectionFactory (/ as per your
installation)
```

- LDAP- based lookup:

```
ConnectionFactory: cn=QueueConnectionFactory (/ as per your
installation)
JMS Username and Password: (/ as per your installation)
```

Uninstalling the Software

To uninstall the software:

1. In ActiveMatrix Administrator, remap service units and then relocate service assemblies:
   a. Remap all service units mapped to nodes running on the machine to nodes running on different machines.
   b. Relocate the service assemblies that contain the remapped service units.
2. Stop and delete each node running on the machine.
3. Stop and delete each ActiveMatrix Administrator server running on the machine:
   a. Stop the server.
   b. Delete the server from the cluster in ActiveMatrix Administrator.
   c. On Windows, delete the ActiveMatrix Administrator Windows service by following the procedure in Deleting the ActiveMatrix Administrator Windows Service in *TIBCO ActiveMatrix Administration*.
4. Stop TIBCO Business Studio.
5. Stop the HSQLDB server.
6. Stop TIBCO Management Daemon.
7. Run the uninstaller:
   a. Navigate to *ENV_HOME*`/_uninstall` and run **universal_uninstall**.
   b. The wizard provides uninstall options for all the installed ActiveMatrix products. Deselect the checkboxes for products you do not want to uninstall and then click **Uninstall**.

      When uninstalling, popup windows appear warning that an updated file needs to be deleted. Click **Yes to All** to remove the file and subsequent files in the assembly. Because popup windows are generated for each installed assembly, you may see multiple popup windows.
   c. The summary screen appears. Click **Finish** to exit the uninstall wizard. After uninstalling the software, the uninstaller may prompt you to reboot your computer.

8. Clean up directories. After running the uninstaller, manually delete the following directories under *ENV_HOME*:
   - `amx`
   - `amxadministrator`
   - `BusinessStudio`
   - `log`
   - `managementdaemon`
   - `tools`

Frequently Asked Questions

Why and how should I set the DISPLAY variable on Solaris for GUI mode?

The installer on Solaris opens an additional window, generally for graphics. It uses the DISPLAY environment variable to tell it on which computer to open the window. If the environment variable is not set, the installer will either wait or abort after displaying:

```
InstallShield Wizard
Initializing InstallShield Wizard...
Preparing Java(tm) Virtual Machine...
.....................................
.....................................
........
```

Set the DISPLAY variable to the IP address or name of the computer (on which the installer graphics window is to be displayed), followed by a screen address, which can be `:0.0`. For example:

```
# Bourne shell
DISPLAY=ip_address:0.0; export DISPLAY

# Korn shell
export DISPLAY=ip_address:0.0
# C-shell
setenv DISPLAY ip_address:0.0
```

For example, consider a scenario where you need to install TIBCO ActiveMatrix Service Bus on a remote Solaris machine (named `itaska`). Because you have a Solaris 5.6 machine (named `alaska`) that has a video card and monitor installed, you can run an X-window application on it. So you decide to telnet to `itaska` from `alaska`.

When you telnet to `itaska`, you will not get access to `itaska`'s monitor and will be unable to display an X-window application. That is why you must set the `DISPLAY` variable, which instructs the X-server to redirect all windows to the computer set in the variable. Before doing so, the computer (specified in the `DISPLAY` variable) must give permissions to share its monitor.

```
alaska> xhost + # give permission for all to its share monitor
alaska> telnet itaska
Welcome to HPUX itaska 11.00
User:
Password:
itaska> export DISPLAY=alaska:0.0  # set display on alaska
itaska> tar -xvf TIB_tra-suite_5.0.0_h7_11.tar
```

What is uninst2 directory?

If the original uninstall directory is in use at uninstall time, it cannot be removed by the installer program. The installer then creates a second uninstall directory for the second installation. To remove the second installation, run the uninstall program from the second uninstall directory. The original uninstall directory can also be manually removed, if empty.

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